

## REMARKS

This is a full and timely response to the outstanding final Office Action mailed April 16, 2008. The Examiner is thanked for the thorough examination of the present application. Upon entry of this response, claims 1-21 are pending in the present application.

### I. Present Status of Patent Application

#### A. Claims 1-21

Claims 1-21 have been rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over U.S. Patent No. 6,263,048 issued to Nelson (hereafter "*Nelson*") in view of U.S. Patent No. 7,149,190 issued to Li et al. (hereafter "*Li*").

For at least the reasons set forth below, Applicants respectfully traverse the rejection.

#### **Independent claim 1 recites:**

1. A method for dynamic bin allocation, the method comprising:  
obtaining link performance data based on a plurality of test transmissions between two network elements, wherein the ***plurality of test transmissions utilize each of a plurality of transmission modes in each of a plurality of frequency ranges;***  
determining a desired transmission scheme, wherein each of the plurality of frequency ranges is designated for one of the transmission modes based at least in part on the link performance data; and  
***assigning the desired transmission scheme to a connection between the two network elements.***

(Emphasis added).

Applicant respectfully submits that claim 1 is patentably distinct from the cited art for at least the reason that the cited art does not disclose the features emphasized above. For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of

references must disclose, teach, or suggest all elements/features of the claim at issue.

See, e.g., *In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

The Office Action cites *Li* in an attempt to alleviate the deficiencies of the *Nelson* reference with regard to the rejection of claim 1. Applicants respectfully disagree. Neither the *Nelson* nor the *Li* references describe any type of bin allocation system or method, much less a method reading on independent claim 1. The cited portions of the *Li* reference concern selection of a **forward link carrier**, which entails selection of a carrier frequency for a **forward link**, or, in other words from a base transceiver station to a class A mobile station. See *Li*, column 4, lines 1-14. In contrast, the claimed invention concerns a bin allocation scheme involving allocation of **various** transmission modes throughout a frequency range.

In other words, while the *Li* reference discloses selection of a carrier frequency for a **forward link**, the claimed invention claims a bin allocation scheme for apportioning transmission modes across a specified frequency range. For example, the claimed invention, as further described in the Specification, includes apportioning upstream, downstream **and** full-duplex transmission modes across a frequency range, while the cited *Li* reference relied on by the Office Action discloses determining a carrier frequency from among a first **forward link** and a second **forward link**. See *Li*, column 4, lines 32-37. Moreover, the cited *Li* reference fails to disclose utilizing **multiple** test transmissions utilizing **each of the transmission modes**, as it appears to disclose determining a carrier frequency for a **forward link** rather than a transmission scheme including apportionment of the various transmission modes across the frequency range.

In addition, the *Li* reference entails selecting from among a first base transceiver station and a second base transceiver station for communication with a class A mobile station. See *Li*, column 4, lines 37-46. As opposed to testing and probing various connections between two base transceiver stations and a class A mobile station, as is further noted in column 4, lines 1-10 of the *Li* reference, the claimed invention does not entail selecting from among multiple base transceiver stations. Rather, the claimed invention includes determining a transmission scheme for a communication link by apportioning transmission modes to various bins along a frequency range in an existing **connection between two network elements**.

As the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 1, the rejection should be withdrawn for at least that reason. Further, for at least the reason that independent claim 1 is allowable over the cited references of record, dependent claims 2-12 (which depend from independent claim 1) are allowable as a matter of law for at least the reason that dependent claims 2-12 contain all the features of independent claim 1. See *Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002); *Jeneric/Pentron, Inc. v. Dillon Co.*, 205 F.3d 1377, 54 U.S.P.Q.2d 1086 (Fed. Cir. 2000); *Wahpeton Canvas Co. v. Frontier Inc.*, 870 F.2d 1546, 10 U.S.P.Q.2d 1201 (Fed. Cir. 1989). Therefore, the rejection of claims 2-12 should be withdrawn and the claims allowed.

Additionally, with regard to the rejection of claims 2-12, *Li* does not make up for the deficiencies of *Nelson* noted above. Therefore, claims 2-12 are considered patentable over any combination of these documents for at least the reason that claims

2-12 incorporate allowable features of claim 1 as set forth above.

**Independent claim 13** recites:

13. A system for dynamic bin allocation, the system comprising a first network element and a second network element, wherein each of the first network element and the second network element comprises at least a processor module and a transceiver module that are coordinated to obtain link performance data based on a plurality of test transmissions between the first network element and the second network element, **wherein the plurality of test transmissions utilize each of a plurality of transmission modes in each of a plurality of frequency ranges;**  
**determine a desired transmission scheme, wherein each of the plurality of frequency ranges is designated for one of the transmission modes based at least in part on the link performance data; and**  
**assign the desired transmission scheme to a connection between the two network elements.**

(Emphasis added).

Applicant respectfully submits that claim 13 is patentably distinct from the cited art for at least the reason that the cited art does not disclose the features emphasized above. For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features of the claim at issue. See, e.g., *In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

The Office Action cites *Li* in an attempt to alleviate the deficiencies of the *Nelson* reference with regard to the present rejection. Applicants respectfully disagree. Neither the *Nelson* nor the *Li* references describe any type of bin allocation system or method, much less a system reading on independent claim 13. The cited portions of the *Li* reference concern selection of a **forward link carrier**, which entails selection of a carrier

frequency for a **forward link**, or, in other words from a base transceiver station to a class A mobile station. See *Li*, column 4, lines 1-14. In contrast, the claimed invention concerns a bin allocation scheme involving allocation of **various** transmission modes throughout a frequency range.

In other words, while the *Li* reference discloses selection of a carrier frequency for a **forward link**, the claimed invention claims a bin allocation scheme for apportioning transmission modes across a specified frequency range. For example, the claimed invention, as noted in the Specification, includes apportioning upstream, downstream **and** full-duplex transmission modes across a frequency range, while the cited *Li* reference relied on by the Office Action discloses determining a specific carrier frequency from among a first forward link and a second forward link. See *Li*, column 4, lines 32-37. In addition, the *Li* reference entails selecting from among a first base transceiver station and a second base transceiver station for communication with a class A mobile station. See *Li*, column 4, lines 37-46. As opposed to testing and probing various connections between base transceiver station and a class A mobile station, as is noted in column 4, lines 1-10 of the *Li* reference, the claimed invention does not entail selecting from among multiple base transceiver stations. Rather, the claimed invention includes determining a transmission scheme for a communication link by apportioning transmission modes to various bins along a frequency range in an existing **connection between two network elements**.

As the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 13, the rejection should be withdrawn for at least that reason. Further, for at least the reason that independent

claim 13 is allowable over the cited references of record, dependent claims 14 and 15 (which depend from independent claim 13) are allowable as a matter of law for at least the reason that dependent claims 14 and 15 contain all the features of independent claim 13. See *Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002); *Jeneric/Pentron, Inc. v. Dillon Co.*, 205 F.3d 1377, 54 U.S.P.Q.2d 1086 (Fed. Cir. 2000); *Wahpeton Canvas Co. v. Frontier Inc.*, 870 F.2d 1546, 10 U.S.P.Q.2d 1201 (Fed. Cir. 1989). Therefore, the rejection of claims 14 and 15 should be withdrawn and the claims allowed.

Additionally, with regard to the rejection of claims 14 and 15, *Li* does not make up for the deficiencies of *Nelson* noted above. Therefore, claims 14 and 15 are considered patentable over any combination of these documents for at least the reason that claims 14 and 15 incorporate allowable features of claim 13 as set forth above.

**Independent claim 16** recites:

16. A system for dynamic bin allocation, the system comprising:  
means for obtaining link performance data based on a plurality of test transmissions between two network elements, **wherein the plurality of test transmissions utilize each of a plurality of transmission modes in each of a plurality of frequency ranges;**  
means for determining a desired transmission scheme, wherein **each of the plurality of frequency ranges is designated for one of the transmission modes** based at least in part on the link performance data;  
and  
means for **assigning the desired transmission scheme to a connection between the two network elements.**

(Emphasis added).

Applicant respectfully submits that claim 16 is patentably distinct from the cited art for at least the reason that the cited art does not disclose the features emphasized above.

For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features of the claim at issue. See, e.g., *In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

The Office Action cites *Li* in an attempt to alleviate the deficiencies of the *Nelson* reference with regard to the present rejection. Applicants respectfully disagree. Neither the *Nelson* nor the *Li* references describe any type of bin allocation system or method, much less a system reading on independent claim 16. The cited portions of the *Li* reference concern selection of a **forward link carrier**, which entails selection of a carrier frequency for a **forward link**, or, in other words from a base transceiver station to a class A mobile station. See *Li*, column 4, lines 1-14. In contrast, the claimed invention concerns a bin allocation scheme involving allocation of **various** transmission modes throughout a frequency range.

In other words, while the *Li* reference discloses selection of a carrier frequency for a **forward link**, the claimed invention claims a bin allocation scheme for apportioning transmission modes across a specified frequency range. For example, the claimed invention includes apportioning upstream, downstream **and** full-duplex transmission modes across a frequency range, while the cited *Li* reference relied on by the Office Action discloses determining a specific carrier frequency from among a first forward link and a second forward link. See *Li*, column 4, lines 32-37. In addition, the *Li* reference entails selecting from among a first base transceiver station and a second base transceiver station for communication with a class A mobile station. See *Li*, column 4, lines 37-46. As opposed to testing and probing various connections between base

transceiver station and a class A mobile station, as is noted in column 4, lines 1-10 if the *Li* reference, the claimed invention does not entail selecting from among multiple base transceiver stations. Rather, the claimed invention includes determining a transmission scheme for a communication link by apportioning transmission modes to various bins along a frequency range in an existing **connection between two network elements**.

As the cited combination of references does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 16, the rejection should be withdrawn for at least that reason. For at least the reason that independent claim 16 is allowable over the cited references of record, dependent claims 17 and 18 (which depend from independent claim 16) are allowable as a matter of law for at least the reason that dependent claims 17 and 18 contain all the features of independent claim 16. See *Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002) *Jeneric/Pentron, Inc. v. Dillon Co.*, 205 F.3d 1377, 54 U.S.P.Q.2d 1086 (Fed. Cir. 2000); *Wahpeton Canvas Co. v. Frontier Inc.*, 870 F.2d 1546, 10 U.S.P.Q.2d 1201 (Fed. Cir. 1989). Therefore, the rejection of claims 17 and 18 should be withdrawn and the claims allowed.

Additionally, with regard to the rejection of claims 17 and 18, *Li* does not make up for the deficiencies of *Nelson* noted above. Therefore, claims 17 and 18 are considered patentable over any combination of these documents for at least the reason that claims 17 and 18 incorporate allowable features of claim 16 as set forth above.



**Independent claim 19** recites:

19. A computer readable medium having code for causing a processor to perform dynamic bin allocation, the computer readable medium comprising:

code adapted to obtain link performance data based on a plurality of test transmissions between the first network element and the second network element, wherein ***the plurality of test transmissions utilize each of a plurality of transmission modes in each of a plurality of frequency ranges***; and

code adapted to determine a desired transmission scheme, wherein ***each of the plurality of frequency ranges is designated for one of the transmission modes*** based at least in part on the link performance data; and

code adapted to ***assign the desired transmission scheme to a connection between the two network elements.***

(Emphasis added).

Applicant respectfully submits that claim 19 is patentably distinct from the cited art for at least the reason that the cited art does not disclose the features emphasized above. For a proper rejection of a claim under 35 U.S.C. §103, the cited combination of references must disclose, teach, or suggest all elements/features of the claim at issue. See, e.g., *In re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988) and *In re Keller*, 208 U.S.P.Q.2d 871, 881 (C.C.P.A. 1981).

The Office Action cites *Li* in an attempt to alleviate the deficiencies of the *Nelson* reference with regard to the present rejection. Applicants respectfully disagree. Neither the *Nelson* nor the *Li* references describe any type of bin allocation system method, much less a computer readable medium reading on independent claim 19. The cited portions of the *Li* reference concern selection of a ***forward link carrier***, which entails selection of a carrier frequency for a ***forward link***, or, in other words from a base transceiver station to a class A mobile station. See *Li*, column 4, lines 1-14. In contrast, the claimed

invention concerns a bin allocation scheme involving allocation of **various** transmission modes throughout a frequency range.

In other words, while the *Li* reference discloses selection of a carrier frequency for a **forward link**, the claimed invention claims a bin allocation scheme for apportioning transmission modes across a specified frequency range. For example, the claimed invention includes apportioning upstream, downstream **and** full-duplex transmission modes across a frequency range, while the cited *Li* reference relied on by the Office Action discloses determining a specific carrier frequency from among a first forward link and a second forward link. See *Li*, column 4, lines 32-37. In addition, the *Li* reference entails selecting from among a first base transceiver station and a second base transceiver station for communication with a class A mobile station. See *Li*, column 4, lines 37-46. As opposed to testing and probing various connections between base transceiver station and a class A mobile station, as is noted in column 4, lines 1-10 of the *Li* reference, the claimed invention does not entail selecting from among multiple base transceiver stations. Rather, the claimed invention includes determining a transmission scheme for a communication link by apportioning transmission modes to various bins along a frequency range in an existing **connection between two network elements**.

As the cited (combination of) reference(s) do/does not disclose, teach, or suggest, either implicitly or explicitly, all the elements of claim 19, the rejection should be withdrawn for at least that reason. For at least the reason that independent claim 19 is allowable over the cited references of record, dependent claims 20 and 21 (which depend from independent claim 19) are allowable as a matter of law for at least the reason that dependent claims 20 and 21 contain all the features of independent claim

19. See *Minnesota Mining and Manufacturing Co. v. Chemque, Inc.*, 303 F.3d 1294, 1299 (Fed. Cir. 2002) *Jeneric/Pentron, Inc. v. Dillon Co.*, 205 F.3d 1377, 54 U.S.P.Q.2d 1086 (Fed. Cir. 2000); *Wahpeton Canvas Co. v. Frontier Inc.*, 870 F.2d 1546, 10 U.S.P.Q.2d 1201 (Fed. Cir. 1989). Therefore, the rejection of claims 20 and 21 should be withdrawn and the claims allowed.

Additionally, with regard to the rejection of claims 20 and 21, *Li* does not make up for the deficiencies of *Nelson* noted above. Further, with regard to claims 20 and 21, *Li* does not make up for the deficiencies of *Nelson* noted above. Therefore, claims 20 and 21 are considered patentable over any combination of these documents for at least the reason that claims 20 and 21 incorporate allowable features of claim 19 as set forth above.

## II. Miscellaneous Issues

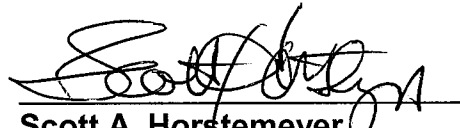
Any other statements in the Office Action that are not explicitly addressed herein are not intended to be admitted. In addition, any and all findings of inherency are traversed as not having been shown to be necessarily present. Furthermore, any and all findings of well-known art and official notice, or statements interpreted similarly, should not be considered well known for the particular and specific reasons that the claimed combinations are too complex to support such conclusions and because the Office Action does not include specific findings predicated on sound technical and scientific reasoning to support such conclusions.

**CONCLUSION**

In light of the foregoing amendments and for at least the reasons set forth above, Applicant respectfully submits that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that the now pending claims 1-21 are in condition for allowance. Favorable reconsideration and allowance of the present application and all pending claims are hereby courteously requested. If, in the opinion of the Examiner, a telephonic conference would expedite the examination of this matter, the Examiner is invited to call the undersigned attorney at (770) 933-9500.

It is believed that no extensions of time or fees for net addition of claims are required, beyond those which may otherwise be provided for in documents accompanying this paper. However, in the event that additional extensions of time are necessary to allow consideration of this paper, such extensions are hereby petitioned under 37 C.F.R. § 1.136(a), and any fees required therefor (including fees for net addition of claims) are hereby authorized to be charged to deposit account No. 50-0835.

Respectfully submitted,

  
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